

AMENDMENTS TO THE CLAIMS

1. **(Original)** A purified nucleic acid sequence encoding a homologue of human interleukin 10 (IL-10), wherein said IL-10 homologue is expressed during the latent phase of infection by a virus of the herpesviridae group, and wherein said nucleic acid sequence is as set forth in SEQ ID NO:1.

2. **(Original)** The nucleic acid of claim 1 wherein the virus of the herpesviridae group is selected from the group consisting of: Epstein-Barr virus, human herpesvirus (HHV)-6, HHV-7, HHV-8, varicella zoster virus, herpes simplex type 1 and type 2 virus and cytomegalovirus.

3. **(Original)** An isolated homologue of human interleukin 10 (IL-10) polypeptide, wherein said IL-10 homologue is expressed during the latent phase of infection by a virus of the herpesviridae group, and wherein said IL-10 homologue has the amino acid sequence as set forth in SEQ ID NO:10, or the amino acid sequence as set forth in SEQ ID NO:10 including one or more conservative amino acid substitutions.

4. **(Original)** The IL-10 homologue of claim 3, wherein said homologue is the product of alternative splicing of the primary RNA transcript.

5. **(Currently amended)** The IL-10 homologue of claim 3-~~or 4~~, wherein said IL-10 homologue is from the UL111.5A region of the cytomegalovirus genome.

6. **(Currently amended)** A vector comprising a nucleic acid sequence ~~in accordance with either one of claims 1 or 2, or a nucleic acid encoding an isolated homologue of human interleukin 10 (IL-10) polypeptide, wherein said IL-10 homologue is expressed during the latent phase of infection by a virus of the herpesviridae group, and wherein said IL-10 homologue has the amino acid sequence as set forth in SEQ ID NO:10, or the amino acid sequence as set forth in SEQ ID NO:10 including one or more conservative amino acid substitutions~~ the polypeptide of any one of claims 3 to 5.

7. **(Currently amended)** A recombinant host cell comprising ~~the nucleic acid sequence in accordance with either one of claims 1 or 2 or the vector in accordance with claim 6.~~

8. **(Currently amended)** A recombinant host cell ~~capable of expressing the polypeptide of any one of claims~~ claim 3 to 5.

9. **(Currently amended)** An isolated ligand that selectively binds to the isolated homologue of ~~polypeptide of any one of claims~~ claim 3 to 5.

10. **(Original)** The ligand of claim 9, wherein said ligand is an antibody.
11. **(Currently amended)** A method of identifying a compound that interacts with the polypeptide of ~~any one of claims~~ claim 3-to-5, the method comprising the steps of:
 - (a) contacting a candidate compound with the polypeptide under conditions suitable to permit interaction of the candidate compound to the polypeptide thereof; and
 - (b) detecting the interaction between the candidate compound and the polypeptide.
12. **(Original)** The method of claim 11, wherein said interaction is detected by adding a labelled substrate and measuring a change in the labelled substrate.
13. **(Currently amended)** A method of identifying a compound that binds to the polypeptide of ~~any one of claims~~ claim 3-to-5, the method comprising the steps of:
 - (a) contacting a candidate compound with the polypeptide; and
 - (b) assaying for the formation of a complex between the candidate compound and the polypeptide.
14. **(Original)** The method of claim 13, wherein said assay for the formation of a complex be selected from the group consisting of: a competitive binding assay, a two-hybrid assay or an immunoprecipitation assay.
15. **(Currently amended)** A method of screening for a compound that modulates the activity of the polypeptide of ~~any one of claims~~ claim 3-to-5, the method comprising the steps of:
 - (a) contacting the polypeptide with a candidate compound under conditions suitable to enable interaction of the candidate compound to the polypeptide; and
 - (b) assaying for activity of the polypeptide.
16. **(Original)** The method of claim 15, wherein said assay for activity of the polypeptide comprises adding a labelled substrate and measuring a change in the labelled substrate.
17. **(Currently amended)** A method of diagnosing a disease state, or predisposition to a disease state, in a subject, the method comprising the steps of:
 - (a) obtaining a biological sample from the subject; and
 - (b) assaying for expression of the polypeptide of ~~any one of claims~~ claim 3-to-5 in the sample.

18. **(Original)** The method of claim 17, wherein said assay for the expression of the polypeptide comprises contacting the biological sample with a compound capable of interacting with the polypeptide such that the interaction can be detected.

19. **(Currently amended)** The method of claim ~~17 or~~ 18, wherein the compound capable of selectively interacting with the polypeptide is an antibody or fragment thereof.

20. **(Currently amended)** A method of identifying an agent which is an inhibitor of infection by a virus of the herpesviridae group, the method comprising contacting a cell or cell extract with one or more candidate agents, determining whether there is a change in the activity of ~~[[a]] the polypeptide of any one of claims~~ claim 3 to 5 and thereby determining whether the agent is an inhibitor of a virus of the herpesviridae group.

21. **(Currently amended)** The method of ~~any one claims 11, 13, 15, 17, or to claim~~ 20, wherein said viruses of the herpesviridae group ~~are~~ is selected from the group consisting of: Epstein-Barr virus, human herpesvirus (HHV)-6, HHV-7, HHV-8, varicella zoster virus, herpes simplex type 1 ~~and~~ , herpes simplex type 2 and cytomegalovirus.

22. **(Currently amended)** A method of identifying an agent suitable for use in the treatment or prevention of a disease state in a subject, the method comprising:

- (a) obtaining a biological sample from the subject,
- (b) contacting the sample with a candidate agent,
- (c) determining whether there is a change in the activity of the polypeptide of ~~any one of claims~~ claim 3 to 5, and
- (d) thereby determining whether the agent is suitable for use in the treatment of the disease state.

23. **(Currently amended)** A method for treating or preventing a disease state in a subject, the method comprising administering to the subject a therapeutically effective amount of the ligand of claim 9 ~~or 10 or a compound identified by the method of any one of claims 11 to 22.~~

24. **(Currently amended)** A kit comprising a purified nucleic acid sequence encoding a homologue of human interleukin 10 (IL-10), wherein said IL-10 homologue is expressed during the latent phase of infection by a virus of the herpesviridae group, and wherein said nucleic acid sequence is as set forth in SEQ ID NO:1~~the nucleic acid sequence in accordance with either one of claims 1 or 2 or an isolated homologue of human interleukin 10 (IL-10)~~ polypeptide, wherein said IL-10 homologue is expressed during the latent phase of infection by a

virus of the herpesviridae group, and wherein said IL-10 homologue has the amino acid sequence as set forth in SEQ ID NO:10, or the amino acid sequence as set forth in SEQ ID NO:10 including one or more conservative amino acid substitutions~~the polypeptide of any one of claims 3 to 5, or the ligand that selectively binds to said isolated homologue of IL-10 of claim 9 or 10.~~

25. **(Original)** The kit of claim 24, wherein the ligand is an antibody.

26. **(Currently amended)** A method for screening a subject for infection by a virus of the herpesviridae group, the method comprising:

- (a) obtaining a biological sample from said subject;
- (b) contacting said sample with the ligand of claim 9 ~~or 10~~, and
- (c) detecting the presence of ligand selectively bound to an isolated homologue of human interleukin 10 (IL-10) polypeptide, wherein said IL-10 homologue is expressed during the latent phase of infection by a virus of the herpesviridae group, and wherein said IL-10 homologue has the amino acid sequence as set forth in SEQ ID NO:10, or the amino acid sequence as set forth in SEQ ID NO:10 including one or more conservative amino acid substitutions~~the polypeptide of any one of claims 3 to 5.~~

27. **(Original)** The method of claim 26, wherein the biological sample is a plasma or cell sample.

28. **(Currently amended)** A method for screening a subject for infection by a virus of the herpesviridae group, the method comprising:

- (a) obtaining a biological sample from said subject;
- (b) contacting said biological sample from said subject with the nucleic acid sequence of ~~either one of claims~~ claim 1 or 2; and
- (c) detecting the presence or absence of hybridisation between the nucleic acid sample of said biological subject and the nucleic acid sequence of ~~either one of claims 1 or 2.~~

29. **(Canceled)**

30. **(Original)** The method of claim 28 ~~or 29~~, wherein the nucleic acid is capable of selectively hybridising to the nucleic acid encoding the IL-10 homologue expressed during the latent phase of infection by a virus of the herpesviridae group.

31. **(Currently amended)** The method of ~~any one of claims~~ claim 28 to 30, wherein the nucleic acid sequence corresponds to any one of SEQ ID Nos:2 to 9.

32. **(Original)** An isolated nucleic acid, wherein the nucleic acid sequence corresponds to any one of SEQ ID Nos:2 to 9.

33. **(Currently amended)** A method for screening a biological sample for infection by a virus of the herpesviridae group, the method comprising:

(a) contacting said biological sample with an isolated ligand that selectively binds to an isolated homologue of claim 3~~the ligand of claims 9 or 10~~, and

(b) detecting the presence of the ligand selectively bound to the isolated homologue of claim 3~~the polypeptide of any one of claims 3 to 5~~.

34. **(Original)** The method of claim 33, wherein said ligand is an antibody.

35. **(Currently amended)** The method of claim 33 ~~or 34~~, wherein the sample is selected from the group consisting of: blood, bone marrow or organ(s) ~~or~~ and spinal fluid.

36. **(Currently amended)** The method of ~~any one of claims 30 to 31 or~~ claim 33 to 35, wherein the sample is intended to be used in a subject selected from the group consisting of: transplant recipients (bone marrow, stem cell or solid organ), subjects undergoing immunosuppression therapy and immunocompromised subjects.

37. **(Original)** The method of claim 36, wherein the immunocompromised subject is a subject suffering from acquired immune deficiency syndrome (AIDS) or diagnosed as infected with human immunodeficiency virus (HIV).

38. **(Currently amended)** A method of immunosuppression in a subject, said method comprising administering a therapeutically effective amount of the polypeptide of ~~any one of~~ claims 3 to 5.

39. **(Currently amended)** The method of ~~any one of claims 22 to 31 or~~ claim 33 to 38, wherein the virus of the herpesviridae group is selected from the group consisting of: Epstein-Barr virus, human herpesvirus (HHV)-6, HHV-7, HHV-8, varicella zoster virus, herpes simplex type 1 and type 2 and cytomegalovirus.

40. **(Currently amended)** A vaccine, wherein said vaccine comprises a purified nucleic acid sequence encoding a homologue of human interleukin 10 (IL-10), wherein said IL-10 homologue is expressed during the latent phase of infection by a virus of the herpesviridae group, and wherein said nucleic acid sequence is as set forth in SEQ ID NO:1~~a nucleic acid~~

~~molecule of either one of claims 1 or 2, or an isolated homologue of human interleukin 10 (IL-10) polypeptide, wherein said IL-10 homologue is expressed during the latent phase of infection by a virus of the herpesviridae group, and wherein said IL-10 homologue has the amino acid sequence as set forth in SEQ ID NO:10, or the amino acid sequence as set forth in SEQ ID NO:10 including one or more conservative amino acid substitutions~~a polypeptide of any one of ~~claims 3 to 5, or a ligand that selectively binds to said isolated homologue of IL-10 of claim 9 or 10,~~ together with a pharmaceutically acceptable carrier, adjuvant and/or diluent.

41. **(Currently amended)** A method for inducing an immune response in a vertebrate against disease associated with infection by a virus of the herpesviridae group, comprising administering to said vertebrate an immunologically effective amount of ~~the polypeptide of any one of claims 3 to 5, or a ligand of claim 9 or 10, or a vaccine of claim 40,~~ wherein said method induces an immune response.

42. **(Currently amended)** A method for the treatment and/or prophylaxis of disease associated with infection by a virus of the herpesviridae group in a vertebrate, wherein said method comprises administering a therapeutically effective amount of ~~the polypeptide of any one of claims 3 to 5, or a ligand of claim 9 or 10, or the vaccine of claim 40,~~ wherein said method treats or prevents disease associated with infection by a virus of the herpesviridae group in a vertebrate.

43. **(Currently amended)** The method of claim 41 ~~or 42,~~ wherein the polypeptide or ligand is simultaneously or sequentially administered with cytokines.

44. **(Original)** The method of claim 43, wherein the cytokines are selected from the group consisting of: G-CSF, GM-CSF and interleukins.

45. **(Currently amended)** A method of cleansing a biological sample of infection by a virus of the herpesviridae group, the method comprising:

(a) contacting said biological sample with an isolated ligand that selectively binds to an isolated homologue of human interleukin 10 (IL-10) polypeptide, wherein said IL-10 homologue is expressed during the latent phase of infection by a virus of the herpesviridae group, and wherein said IL-10 homologue has the amino acid sequence as set forth in SEQ ID NO:10, or the amino acid sequence as set forth in SEQ ID NO:10 including one or more conservative amino acid substitutions~~the ligand of claim 9 or 10,~~

(b) detecting the presence of the ligand bound to a cell expressing an isolated homologue of human interleukin 10 (IL-10) polypeptide, wherein said IL-10 homologue is expressed during the latent phase of infection by a virus of the herpesviridae group, and wherein said IL-10 homologue has the amino acid sequence as set forth in SEQ ID NO:10, or the amino acid sequence as set forth in SEQ ID NO:10 including one or more conservative amino acid substitution~~the polypeptide of any one of claims 3 to 5, and~~

(c) removing said cell to which said ligand binds.

46. **(Original)** The method of claim 45, wherein the detection step (b) is an intracellular staining assay.

47. **(Original)** The method of claim 46, wherein the cells identified are then be removed from a mixed cell population by flow cytometry.

48. **(Currently amended)** The method of claim 45 ~~any one of claims 17 to 31, 33 to 39 or 41 to 47,~~ wherein the disease state is one arising from infection by a virus of the herpesviridae group.

49. **(Original)** The method of claim 48, wherein said virus ~~the disease~~ is selected from the group consisting of: Epstein-Barr virus, human herpesvirus (HHV)-6, HHV-7, HHV-8, varicella zoster virus, herpes simplex type 1 and type 2 and cytomegalovirus.

50. **(Currently amended)** A cleansed biological sample prepared in accordance with the method of ~~any one of claims 45 to 49.~~

51. **(Currently amended)** A method of diagnosis of infection of a subject by a virus of the herpesviridae group, the method comprising:

(a) contacting a biological sample of the subject with an isolated ligand that selectively binds to the isolated homologue of claim 3~~the ligand of claim 9 or 10,~~

(b) detecting the presence of the ligand thereof selectively bound to said isolated homologue of claim 3~~the polypeptide of any one of claims 3 to 5, and~~

(c) diagnosing infection of said subject.

52. **(Currently amended)** A method of diagnosis of infection of a subject by a virus of the herpesviridae group, the method comprising:

(a) obtaining a biological sample from said subject;

(b) contacting said biological sample from said subject with the nucleic acid sequence of ~~either one of claims~~ claim 1 or 2; and

(c) detecting the presence or absence of hybridisation between the nucleic acid sample of said biological sample and the nucleic acid sequence ~~either one of claims claim 1 or 2,~~ and

(d) diagnosing infection of said subject.

53. **(New Claim)** The method of claim 23, wherein said viruses of the herpesviridae group are selected from the group consisting of: Epstein-Barr virus, human herpesvirus (HHV)-6, HHV-7, HHV-8, varicella zoster virus, herpes simplex type 1 and type 2 and cytomegalovirus.

54. **(New Claim)** The method of claim 23 wherein the disease state is one arising from infection by a virus of the herpesviridae group.

55. **(New Claim)** The method of claim 36 wherein said sample to be used in said transplant recipients is selected from the group consisting of bone marrow, stem cell and solid organ.

56. **(New)** The method of claim 42, wherein the polypeptide or ligand is simultaneously or sequentially administered with cytokines.

57. **(New)** The method of claim 56, wherein the cytokines are selected from the group consisting of: G-CSF, GM-CSF and interleukins.